

Remarks

This response is being submitted within one month of the shortened statutory period set for responding to the office action that was mailed on April 3, 2003. Therefore we are enclosing herewith a petition and the fee for an extension of time.

Hereinafter, the claims that are pending prior to the entry of the amendments in this response are called currently pending claims. This response amends currently pending claim 22. Upon amendment, the above-identified US patent application will have 1 independent claim, amended claim 22, and a total of 11 dependent claims, currently pending claims 23, 24, and 26-34. Applicants have previously paid for 34 total claims and two independent claims. Therefore, no excess claims fee has to be paid with this response.

The Examiner objects claims 22 and 25 in item 2 on page 3 of the office action for a spelling mistake. This spelling mistake has been corrected by the Applicants in claims 22 and 34. Claim 25 has been canceled.

Claims rejections 35 U.S.C. §102.

The Examiner rejects claim 22 in items 4 and 5 under 35 U.S.C. §102(b) as being anticipated by US Patent No. 5,651,176 hereinafter called Ma et al.

The Examiner asserts that Ma et al. discloses the method of transferring an individual element from a substrate to another substrate using vibrational energy. The Applicant respectfully traverses the Examiner's assertion. Ma et al. discloses a circuit board fabrication apparatus comprising a vibratory feeder tray, means for picking up parts from the tray, means for transferring picked up parts to a circuit board. See claim 1 of Ma et al. The parts are picked up one at a time and placed at precise positions on circuit board substrates. The feeder tray may be easily reloaded with parts while it is vibrating. The vibratory feeder tray allows for quick delivery of the parts in a consistent orientation and allows for high-volume manufacture of circuit boards.

Therefore, Ma et al. clearly teaches a vibration of the feeder tray in order to be easily reloaded. Ma et al. does not teach feeding individual elements from a seed substrate and using vibrational energy to place the individual elements in receptors formed in a different substrate. Therefore, claim 22 is not anticipated by Ma et al. because Ma et al. discloses vibration of the feeding tray.

The Examiner further asserts that it would have been inherent that the transfer involves gravitational force. This assertion by the Examiner has to be respectfully traversed by the Applicant as well. Ma et al. discloses picking up parts from the vibratory feeder tray and delivering the parts on circuit boards. Why should the gravitational force be used for this transfer? In order to clarify the use of gravitational force, claim 22 has been slightly amended by incorporating the limitation "inclinig a different substrate". Ma et al. does not disclose inclining the different substrate. As a result, Applicant submits that claim 22 and the dependent claims 23, 24 and 26-34 are not anticipated by Ma et al.

Claims rejections 35 U.S.C. §103.

The Examiner rejects claims 23-34 under 35 U.S.C. §103(a) as being unpatentable over Ma et al. in items 6 and 7 on page 4 of the office action. Since claim 25 has been canceled and the amended claim 22 contains a limitation of claim 25, Applicant prefers to discuss the non-obviousness of amended claim 22 as the independent claim.

The limitations of amended claim 22 and the disclosure of Ma et al. have been already discussed above in regard to the rejection under 35 U.S.C. 102(b) in view of Ma et al. As explained above, amended claim 22 is clearly not anticipated by Ma et al. Claim 22 is also not obvious in view of Ma et al. for the following reasons.

Amended claim 22 has the following limitations:

- “A method for fabricating electronics comprising:
 - (a) freeing individual elements from a seed substrate;
 - (b) inclining a different substrate; and

(c) using gravitational forces and vibrational energy to place the individual elements in receptors formed in said different substrate.”

Ma et al. teaches a vibratory feeder tray. The feeder tray is under vibration in order to be easily reloaded with electrical parts. Electrical parts are picked up from the vibratory feeder tray and placed at precise positions on a circuit board substrate. Ma et al. clearly does not teach using gravitational forces and vibrational energy to place the individual elements in receptors found in a different substrate. Why should the vibrational energy be used according to Ma et al. if the parts are placed at a precise position on the circuit board? Ma et al. further does not teach or suggest using gravitational force since the parts are picked up from a vibratory feeder tray and placed at a precise position on a circuit board. Finally, Ma et al. does not teach or suggest inclining a different substrate. To the contrary, according to Ma et al., the parts are placed at a precise position on a circuit board substrate, any kind of inclining of the circuit board substrate has to be strictly avoided. Gravitational forces can only be used if the different substrate is inclined. Ma et al. clearly teaches away from the claim limitations of independent claim 22.

Prima Facia Case of Obviousness.

The Examiner is respectfully reminded that in order to establish a prima facia case of obviousness, three criteria must be met according to the Manual of Patent Examining Procedure (MPEP 2142).

-First, there must be some suggestion or motivation, either in the reference or in the technology generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings.

-Second, there must be a reasonable expectation of success if the references are combined.

-Finally, the prior art references must teach or suggest all of the claim limitations.

Applicant submits that the Examiner has failed to satisfy these criteria in asserting that

the rejected claims are obvious in view of Ma et al.

All the claim limitations are clearly not taught or suggested by Ma et al. as explained above. There will be no motivation in the reference Ma et al. or in the knowledge generally available to one of ordinary skill in the art to modify the reference since Ma et al. teaches vibratory feeder tray and a substrate which should not be inclined. The person skilled in the art would be motivated to improve the vibration of the vibratory feeder tray in order to improve the reloading of parts while it is vibrating by knowing Ma et al. Finally, there would be no reasonable expectation of success by modifying Ma et al. Clearly, the Examiner has cited Ma et al. based on a hindsight reconstruction of the Applicant's claims.

Hence, the Applicant submits that the rejection of amended claim 22 under 35 U.S.C. 103(a) as being unpatentable over Ma et al. is improper. Applicant respectfully requests that the rejection of amended claim 22 on grounds be withdrawn.

Claims 23, 24, 26-34 are directly or indirectly dependent from claim 22. Therefore, the dependent claims are not obvious in view of Ma et al. based on them depending from claim 22.

If the Examiner maintains the rejection of amended claim 22, the Applicant respectfully requests that the Examiner show how the reference teaches or suggests every element of the rejected claim and where the motivation of making the suggested combination can be found in the cited reference. It is believed that the independent claim 22 is allowable and therefore dependent claims 23, 24 and 26-34 are allowable as well. Accordingly, reconsideration and examination of the present application is respectfully requested. The application is now in condition for allowance. Allowance of the application at an early date is respectfully requested.

The Commissioner is authorized to charge any additional fees which may be required or credit overpayment to deposit account no. 12-0415. In particular, if this response is not timely filed, then the Commissioner is authorized to treat this response as including a petition to extend the time period pursuant to 37 CFR 1.136 (a) requesting an extension of time of the number of months necessary to make this response timely filed and the petition fee due in connection therewith may be charged to deposit account no. 12-0415.

I hereby certify that this correspondence is being deposited with the United States Post Office with sufficient postage as first class mail in an envelope addressed to Commissioner for Patents

POB 1450, Alexandria, VA 22313-1450 on

July 31, 2003

(Date of Deposit)

Corinda Humphrey

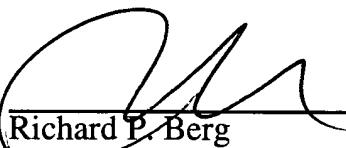
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July 31, 2003

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Respectfully submitted,


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